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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,368	07/11/2003	Chang Ho Choi	2060-3-59	6807

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EXAMINER	
EVERETT, ROKEYA D	

ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,368	CHOI, CHANG HO	
	Examiner	Art Unit	
	Rokeya Everett	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☒ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/11/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 15-23, and 34-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Ardalan (US Patent No. 6,900,737).

In regards to claim 1, Ardalan discloses a remote meter reading system comprising a meter reading system for sending metering information of a subscriber via an infrastructure of a mobile communication system to a remote control system in communication with the meter reading system for collecting the metering information of the subscriber (col. 3, lines 22-45).

In regards to claim 2, Ardalan discloses a remote meter reading system wherein the metering information is transferred to the remote control system via a short message

service (SMS) of the mobile communication system (col. 3, lines 22-25).

In regards to claim 3, Ardalan discloses a remote meter reading system wherein the mobile communication network operates based on a code division multiple access (CDMA) technology (col. 3, lines 22-35).

In regards to claim 15, Ardalan discloses a short messaging structure comprising at least one of a subscriber number of the meter reading system (col. 4, lines 25-33; col. 5, lines 6-10); meter ID of a utility meter (col. 4, lines 25-35); meter reading time for reading a utility meter (col. 3, line 46-col.4, line 3); and service control information for supplying utility to the subscriber (col. 3, line 46-col.4, line 13).

In regards to claim 16, Ardalan discloses a short messaging structure wherein the subscriber number identifies a subscribing household to utility services (col. 4, lines 53-60).

In regards to claim 17, Ardalan discloses a short messaging structure wherein the meter ID identifies a utility meter utilized to measure usage of utility service provided to a subscriber, identified by the subscriber number (col. 4, lines 1-52).

In regards to claim 18, Ardalan discloses a short messaging structure wherein the meter reading time provides a time for reading a utility meter identified by the meter ID (col. 3,

line 46-col.4, line 3).

In regards to claim 19, Ardalan discloses a short messaging structure wherein the service control information provides information to limit services provided to a subscriber identified by the subscriber number (col. 3, line 46-col.4, line 13).

In regards to claim 20, Ardalan discloses a short messaging structure comprising at least one of a subscriber number of the meter reading system (col. 4, lines 25-33; col. 5, lines 6-10); meter ID of a utility meter (col. 4, lines 25-35); meterage information about the subscriber's use (col. 3, lines 54-66); meter reading time for reading a utility meter (col. 3, line 46-col.4, line 3); and meter state information indicating state of utility supplied to the subscriber (col. 3, lines 54-65).

In regards to claim 21, Ardalan discloses a remote meter reading method comprising sending metering information of a subscriber from a meter reading system to a remote control system in communication with the meter reading system via the infrastructure of a mobile communication system (col. 6, lines 18-67).

Claim 22 recites substantially the same limitations as claim 2 and is rejected for the same reason.

Claim 23 recites substantially the same limitations as claim 3 and is rejected for the

same reason.

In regards to claim 34, Ardalan discloses a remote meter reading system wherein the meter reading system sends metering information of the subscriber via an infrastructure of a mobile communication system to the remote control system (col. 6, lines 18-67).

Claim 35 recites substantially the same limitations as claim 2 and is rejected for the same reason.

Claim 36 recites substantially the same limitations as claim 3 and is rejected for the same reason.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4-9, 11-14, 24-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being obvious over Ardalan (US Patent No. 6,900,737) in view of Froelich (US Patent 6,178,197).

In regards to claim 4, Ardalan discloses a meter reading system comprising a meter reading unit in communication with at least one utility meter (col. 3, lines 46-49); a converter unit for converting meterage information provided by the utility meter into a digital signal (col. 3, lines 49-54). Ardalan is silent regarding a multiplexer for selecting the digital signal.

In the same field of endeavor of meter reading systems however, Froelich discloses a multiplexer for selecting the digital signal (col. 15, lines 57-62; fig. 9, element 131) in meter reading systems col. 3, lines 59-64).

It would have been obvious at the time of the invention to use a multiplexer for selecting the digital signal as taught by Froelich because Froelich provides Ardalan with a higher information transfer rate.

In regards to claim 5, Ardalan does not explicitly disclose a meter reading system comprising a controller (col. 4, lines 8-15) for controlling the multiplexer's selection based on number of meters in communication with the meter reading system. In the same field of endeavor however, Froelich discloses a controller for controlling the multiplexer's selection based on number (col. 3, lines 56-64) of meters in communication with the meter reading system (col. 15, line 57-col. 16, line 2).

It would have been obvious at the time of the invention to use a meter reading system comprising a controller for controlling the multiplexer's selection based on number of meters in communication with the meter reading system as taught by Froelich because

Froelich provides Ardalan with a higher information transfer rate.

In regards to claim 6, Ardalan discloses a meter reading system comprising a processor for generating a short message (col. 7, lines 36-43) and is silent regarding specific details of comprising the digital signal selected by the multiplexer. In the same field of endeavor however, Froelich discloses details of comprising the digital signal selected by the multiplexer (col. 15, lines 57-62; fig. 9, element 131).
It would have been obvious at the time of the invention to comprise the digital signal selected by the multiplexer as taught by Froelich because Froelich provides Ardalan with a higher information transfer rate.

In regards to claim 7, Ardalan discloses a meter reading system comprising a communication module (col. 7, lines 1-5; wireless access module) for communicating the short message to the remote control system through the mobile communication network (col. 7, lines 1-35; the AMR enables remote access).

In regards to claim 8, Ardalan discloses a meter reading system wherein the communication module acts as an interface between the remote control system and the meter reading system to receive a message from the remote control system (col. 7, lines 1-5; wireless access module) and transfer it to the processor (col. 7, lines 20-23).

In regards to claim 9, Ardalan discloses a meter reading system wherein when a message is received from the remote control system (AMR), the processor decodes the received message and stores identification information identifying the at least one utility meter (col. 7, lines 65-col. 8, line 8).

In regards to claim 11, Ardalan discloses a meter reading system wherein the message received from the control system comprises instructions to cut off supply to a subscriber (col. 4, lines 10-13).

In regards to claim 12, Ardalan discloses a meter reading system wherein the message comprises at least one of an ID number of a subscriber (col. 4, lines 25-33; col. 5, lines 6-10); an identifier of the utility meter (col. 4, lines 25-35); meter-reading date and time information (col. 3, line 46-col.4, line 3); and information on failure of the meter and its energy leakage (col. 4, lines 14-17).

In regards to claim 13, Ardalan discloses a meter reading system wherein the remote control system comprising a communication module for wirelessly communicating a message with the meter reading system (col. 7, lines 1-35); a decoder for extracting metering information of a subscriber from the message (col. 7, lines 6-25); a processor for managing the extracted metering information and generating at least one control signal for controlling the meter reading system (col. 7, lines 20-23); and an encoder for generating a short message comprising the control signal and providing the short

message to the communication module (col. 7, lines 26-35).

In regards to claim 14, Ardalan discloses a meter reading system wherein the message comprises at least one of: an ID number of a target subscriber (col. 4, lines 25-33; col. 5, lines 6-10); an identifier identifying a utility meter to be read (col. 4, lines 25-35); time information indicating time for reading the meter (col. 3, line 46-col.4, line 3); and control information to control supply to the target subscriber (col. 3, line 54-col. 4, line 13).

In regards to claim 24, Ardalan discloses a remote meter reading method comprising converting meterage information provided by the utility meter into a digital signal (col. 3, lines 49-54) and is silent regarding specific details of selecting the digital signal.
In the same field of endeavor however, Froelich discloses selecting the digital signal (col. 15, lines 57-62; fig. 9, element 131).
It would have been obvious at the time of the invention to select the digital signal as taught by Froelich because Froelich provides Ardalan with a higher information transfer rate.

Claim 25 recites substantially the same limitations as claim 5 and is rejected for the same reason.

Claim 26 recites substantially the same limitations as claim 6 and is rejected for the same reason.

Claim 27 recites substantially the same limitations as claim 7 and is rejected for the same reason.

Claim 28 recites substantially the same limitations as claim 8 and is rejected for the same reason.

Claim 29 recites substantially the same limitations as claim 9 and is rejected for the same reason.

In regards to claim 31, Ardalan discloses a remote meter reading method wherein the message received from the control system comprises instructions to cut off supply to a subscriber (col. 5, line 54-col. 4, line 13).

In regards to claim 32, Ardalan discloses a remote meter reading method wherein the message comprises at least one of an ID number of a subscriber (col. 4, lines 25-33; col. 5, lines 6-10); an identifier of the utility meter (col. 4, lines 25-35); meter-reading date and time information (col. 3, line 46-col.4, line 3); and information on failure of the meter and its energy leakage (col. 4, lines 14-17).

In regards to claim 33, Ardalan discloses a remote meter reading method wherein the message comprises at least one of: an ID number of a target subscriber (col. 4, lines

28-35); an identifier identifying a utility meter to be read (col. 4, lines 28-34); time information indicating time for reading the meter (col. 3, line 54-col. 4, line 3); and control information to control supply to the target subscriber (col. 3, line 54-col. 4, line 13).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being obvious over Ardalan (US Patent No. 6,900,737) in view of Froelich (US Patent 6,178,197) in further view of Franklin (US Patent 5,764,158).

In regards to claims 10 and 30, Ardalan does not explicitly disclose a meter reading system wherein the controller controls the multiplexer based on the identification information.

In the same field of endeavor however, Franklin discloses a meter reading system wherein the controller controls the multiplexer based on the identification information (col. 6, lines 43-55).

It would have been obvious at the time of the invention to use a meter reading system wherein the controller controls the multiplexer based on the identification information as

taught by Franklin because Franklin provides Ardalan with an efficient method of remote monitoring of meters.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Westerlage (6,295,449) discloses a data message in a communications network using a feature request.

Vayanos (6,847,623) discloses a method for allocating data streams onto a single channel.

Campana (6,567,397) discloses a system for wireless exchange of data in a non real time data communications system.

Kelley (6,088,659) discloses an automated meter reading system.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rokeya Everett whose telephone number is (571) 272-5506. The examiner can normally be reached on Mon-Fri, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RDE.

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